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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,442	07/19/2000	Alberto Pique	N.C.79.834	1870

7590 08/27/2004  
Amy Loch Ressing  
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Naval Research Laboratory  
Washington, DC 20375-5000

EXAMINER

FULLER, ERIC B

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 08/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/619,442

Applicant(s)

PIQUE ET AL.

Examiner

Eric B Fuller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-26, 29, 31, 33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-19, 26, 29, 31, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on June 22, 2004 has been entered.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-17, 26, 29, 31, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joyce, Jr. et al. (US 5,292,559) in view of Gnanamuthu et al. (US 4,716,270).

Joyce teaches a pulsed laser deposition process for depositing electrically conductive materials on to a transparent, flexible polymer or quartz, substrate that uses the same configuration as the applicant, i.e. laser through back of transparent substrate (column 2, lines 59-65). It is taught that a multi-layered

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source material that is deposited on the transparent substrate comprises a polymer and metal. The polymer has the property of partially being desorbed from the support when exposed to the laser so that the non-vaporized portion of the source material is deposited on the substrate (abstract). A gap exists between the target substrate and the receiving substrate (figures). It is taught to remove the remaining polymer from the source material that is deposited on the substrate by means known in the art (column 3, lines 35-40). The reference is silent to removing the polymer from the deposited source material with a laser.

However, Gnanamuthu teaches that removing polymers by laser has the benefits of leaving the underlying metal undamaged (abstract). From this, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to use a laser to remove the polymer from the deposited material in Joyce. By doing so, one would reap the benefits of leaving the underlying metal undamaged. The metal with polymer reads on being the source material. After removal of the polymer, the metal that remains reads on being the material of interest.

As to the dependent claims, the breaking of bonds during vaporization of the polymer reads on decomposing.

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joyce, Jr. et al. (US 5,292,559) in view of Gnanamuthu et al. (US 4,716,270), as applied to claim 15 above, and further in view of Hirano et al. (US 6,099,626).

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Joyce, in view of Gnanamuthu, teaches the limitations of claim 15, as shown above, but is silent to the source material comprising metal powder and an organometallic compound. However, Hirano teaches that a mixture of metal powders with organometallic compounds acts as an efficient light to heat converter (column 4, lines 18-44). From this, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize metal powders and organometallic compounds in the source material taught by Joyce. By doing so, one would reap the benefits of efficient light to heat conversion.

### ***Response to Arguments***

Applicant argues that the amended claims overcome the rejections of the previous Office Action. This argument has been found convincing and the rejections of the previous Office Action have been withdrawn, accordingly. All arguments presented have been considered, but are moot in view of the new grounds of rejection.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Examiner further cites Braudy (US 3,745,586) as being pertinent to the applicant's dependant claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B Fuller whose telephone number is

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(571) 272-1420. The examiner can normally be reached on Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck, can be reached at (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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